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Application No: 10/566,624
Amendment A
Reply to Office Action Dated 11/29/2007

Attorney Docket No: 3926.237

IN THE CLAIMS:

The following listing of claims replaces any earlier listing:

- 1-15. (canceled).
16. (currently amended) [[A]] The process according to Claim 25, cylinder head for an internal combustion engine with a metallic valve seat ring, the valve seat ring comprising a Co or Co/Mo base alloy deposited in a homogeneous layer upon the cylinder head by an arc wire spray process, wherein the thickness of the layer is between 0.1 and 2 mm, wherein the sum of the Co and Mo content is greater than 50 wt.% and wherein the Fe content is below 5 wt.%.
17. (currently amended) [[A]] The process cylinder head according to Claim [[16]] 25, wherein the Cr content of the Co/Mo base alloy is from 5 to 30 wt.%.
18. (currently amended) [[A]] The process cylinder head according to Claim [[16]] 25, wherein the nominal chemical composition of the deposited layer in wt.% is: Mo 25 to 35%, Si 1 to 4%, Fe less than 3%, Cr 5 to 20%, C 0.05 to 1%, remainder Co and trace components of less than 1%.
19. (currently amended) [[A]] The process cylinder head according to Claim [[16]] 25, wherein the component of free Mo and/or Co not bound in the Co/Mo base alloy is below 10 Vol.%.
20. (currently amended) [[A]] The process cylinder head according to Claim [[16]] 25, wherein the porosity of the spray deposited layer is below 5%.

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21. (currently amended) ~~[[A]] The process cylinder head~~ according to Claim ~~[[16]] 25~~, wherein the Co/Mo base alloy has a Co content of at least 45 wt.%.
22. (currently amended) ~~[[A]] The process cylinder head~~ according to Claim ~~[[16]] 25~~, wherein the thickness of the spray deposited layer is in the range of 0.5 to 2 mm.
23. (currently amended) ~~[[A]] The process cylinder head~~ according to Claim ~~[[16]] 25~~, wherein the content of the metal oxides or metal nitrides in the spray deposited layer is below 2 wt.%.
24. (cancelled).
25. (currently amended) A process for producing a thermal sprayed valve seat ring, ~~wherein said process comprising:~~
deposition the valve seat ring ~~is deposited~~, by an arc wire spray process, using with a Co-rich filled wire and a Cr and/or Ni rich filled or solid wire, as a homogenous layer of a Co/Mo base alloy upon a substrate material of a cylinder head,
wherein said filled wires comprise a jacket and a filler, and wherein a substantial proportion of the Co in the deposited layer is supplied by the jacket of the filled wire.
26. (currently amended) ~~[[A]] The process according to Claim [[24]] 25~~, wherein the jacket of the Co rich filled wire ~~or the matrix of the Co-rich composite wire~~ has a Co content above 90 wt.% and a Fe content in the range of 0.5 to 5 wt.%.
27. (currently amended) ~~[[A]] The process according to Claim [[24]] 25~~, wherein the ~~[[core]]~~ filler of the Co rich ~~fill~~ filled wire essentially comprises Mo, Cr, Ni and/or Si.

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28. (currently amended) ~~[[A]]~~ The process according to Claim 24, wherein the ~~fill~~ filled wire is produced from a Co strip or a Co pipe and wherein the filler metallic components are in powder form.
29. (currently amended) ~~[[A]]~~ The process according to Claim ~~[[24]]~~ 25, wherein greater than 95% of the material of the filled wire, ~~composite wire~~ or solid wire transition into ~~[[the]]~~ a molten phase during the arc wire spray process.
30. (currently amended) ~~[[A]]~~ The process according to Claim ~~[[24]]~~ 25, wherein a carrier gas is employed in the arc wire spray process, and wherein said carrier gas is N₂ or Ar.

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